

Available online at www.sciencedirect.com

Procedia Social and Behavioral Sciences 7(C) (2010) 613–620

Procedia
Social and Behavioral Sciences

International Conference on Learner Diversity 2010

Effects of Family Functioning, Self-esteem, and Cognitive Distortion on Depression among Malay and Indonesian Juvenile Delinquents

Rohany Nasir^{a,*}, Zainah Ahmad Zamani^a, Rozainee Khairudin^a, Latipun^b^a*Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia, 43600, Bangi, Malaysia*^b*Universitas Muhammadiyah, Malang, Indonesia.*

Abstract

This study investigated the effects of family functioning, self-esteem and cognitive distortion on depression among 189 Malay and 131 Indonesian juvenile delinquents. Research measurements were: Family Adaptability and Cohesion Scale (FACES III), Rosenberg Self-Esteem Scale (RSES), Reynolds Adolescent Depression Scale (RADS), and Cognitive Distortion Scale (CDS). Results indicated that: the Malay juvenile delinquents were significantly more depressed than the Indonesian juvenile delinquents; significant interaction effects of family functioning, self-esteem, and cognitive distortion on depression in both groups; no significant effect of family functioning on depression and finally a significant effect of self-esteem and cognitive distortion on depression.

© 2010 Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/3.0/).

Keywords: Cognitive distortion; Depression; Family functioning; Juvenile delinquents; Self-esteem

1. Introduction

The number of juvenile delinquents is on the rise in many countries and it is becoming a global problem (Carter & Stewin, 1999; Harper & Ibrahim, 1999). In the United States, every five minutes, an adolescent is arrested for committing violent criminal acts and every two hours, a child is shot and killed (Daley & Onwuegbuzie, 2004). The escalating number of juvenile delinquents also occurs in both Malaysia, (although it is within control) (Rokiah, 2000) and Indonesia (Center for Statistics, 1997; Hartanto, 1990). Therefore, it can be expected that the number of adolescents placed in rehabilitation and correctional centres in both countries has risen as well.

Researchers found that delinquent behavior develops and is maintained within the family social context (Loeber, Farrington, Stouthamer-Loeber, Moffitt & Caspi, 1998). A study in Korea by Kim and Kim (2008) which was consistent with findings of those reported in other countries, indicated that delinquent adolescents showed more dysfunctional parental partner dynamics, poorer family functioning, and higher levels of family violence compared

*Corresponding author. Tel: +603-8921-5202; Fax: 03-8921-5264
E-mail address: rohany@ukm.my

to student/non-delinquent adolescents.

Henderson, Dakof, Schwartz & Lidde (2006) suggested that it is likely that family functioning and self-concept work in conjunction with one another to predict adolescent externalizing behaviour. Further, there is a relationship between positive daily parent-child interactions and juvenile delinquents' self-worth, which is an aspect of self-concept (Forney, Crutsinger & Forney, 2006). Many researches had been conducted on self-esteem of juvenile delinquents. For example, Rosenberg's finding has suggested that low self-esteem weakens ties with society and consequently promotes social mal-adaptation and delinquency (Matsuura, Hashimoto & Toichi, 2009).

It is important to note that adolescents at correctional centres have various problems, namely sexual harassment, neglect, broken home, and many more. Some of them also experience mood disorders such as depression (Alessi, McManus, Grapentine & Brickman, 1984; Chiles, Miler, & Cox, 1980, Corneau & Lanctot, 2004). The study by Chiles, et al. (1980) revealed that 23% of 120 adolescent delinquents being studied suffered major depressive disorder.

Depressive symptoms are closely related to juvenile delinquents (Hunt, 2008). For instance, Hunt (2008) has found that adolescents in the correction centres to be more depressed than those from the community based samples. Further, major depression is also found to be more prevalent among juvenile offenders particularly girls than in the general adolescent population (Ryan & Redding, 2004). In relation to depression, self-esteem has been conceptualized as both cause (Roberts, Kessel & Gotlib, 1995) and effect (Kistner, Ziegert, Castro & Robertson, 2001) of depression. Numerous studies have supported the association between negative self-views and vulnerability to depression (Hedlund & Rude, 1995; Hartlege, Arduano & Alloy, 1998).

It is well known that cognitive distortion is a symptom commonly observed among depressed adults. That having been said, adolescents who are depressed also have a tendency to experience cognitive distortion. Marton, Churchard and Kutcher, (1993) have found that depressed adolescents had significantly greater cognitive distortion than non-depressed adolescents. Research on several different populations indicated a relationship between cognitive distortion and depression (Marton, Churchard, & Kutcher, 1993; Maxwell, Gatchel, & Mayer, 1997). Juvenile delinquents showed more depression (Ryan & Reading, 2004), cognitive distortions and problem behaviour than non-delinquents (Barriga, Landau, Stinson, Liao & Gibbs, 2000).

Delinquent adolescents are generally at increased risk of committing future crimes (Doren, Bullis & Benz, 1996; Bullis, Yovaneff, Muller & Havel, 2002) and they are also at risk of not becoming healthy and productive adults (Unruh, Povenmire-Kirk & Yamamoto, 2009). Unruh, et al. also believed that an adolescent's continued criminality jeopardizes stable employment, career and living options as adults. As such, it is crucial that a study is conducted to help understand the problems.

2. Research Purpose

The present study aims to assess: (1) the effects of family functioning and self-esteem on cognitive distortion, (2) difference in family functioning, self-esteem, cognitive distortion and depression between Malay and Indonesian juvenile delinquents, and (3) the effects of family functioning, self-esteem, and cognitive distortion on depression among Malay and Indonesian juvenile delinquents.

3. Research Methodology

3.1. Participant and Procedure

Two independent samples of Malay (189) and Indonesian (131) juvenile delinquents participated in this research. They were from several juvenile delinquents correctional/rehabilitation centres in Malaysia (Malay participants) and Indonesia (Indonesian participants). Permissions from the respective correctional/rehabilitation centres were obtained prior to the research.

3.2. Assessment Measures

Demographic questionnaire was used to obtain background information of the subjects, which includes age, gender, academic background, ethnicity, family income and place of residence.

Rosenberg Self-Esteem Scale (RSES) was used to measure self-esteem. The scale contains 10-items. Responses were evaluated on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The reliability of the RSES for Malay version was $\alpha = .66$.

Cognitive Distortion Scale (CDS) (Briere, 2000) assesses five dimensions of cognitive distortions: self-criticism (SC), self-blame (SB), helplessness (HLP), hopelessness (HOP), and preoccupation with danger (PWD). This scale contains 40 items and each dimension contains eight items. Each item is rated on a 5-point Likert scale, from 1 (*never*) to 5 (*very often*). The total score for the CDS is between 40 and 200 and for each dimension the total score is between 8 and 40. High scores indicate high cognitive distortion. The reliability of CDS for the Malay version was $\alpha = .97$.

Family Adaptability and Cohesion Evaluation Scales Third Edition (FACES III) (Olson, Russell & Sprenkle, 1979) contains 20 items for assessing real family condition and ideal/imaginary family condition. Each item is rated on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). The reliability of FACES III for the Malay version was $\alpha = .80$.

The Reynolds Adolescent Depression Scale (RADS) (Reynolds & Mazza, 1998) was developed to evaluate the severity of depressive symptoms in adolescent ages 12 through 18 years. The RADS consists 30 items with 4-point Likert scale. Responses were evaluated on a 4-point scale ranging from 1 (*never*) to 4 (*always*). Possible total scores ranged from 30 to 120. Scores from 30 to 60 indicate that someone was in mid depression, scores from 61 to 90 represent moderate depression, and scores from 91 to 120 indicate severe depression. The reliability of RADS for the Malay version was $\alpha = .90$.

All instruments were translated into the Malay and Indonesian languages using Brislin, Lonner & Thorndike's (1973) back translation technique.

3.3. Analysis

T-test was used to ascertain the differences in the research variables (depressive symptoms, cognitive distortion, family functioning and self-esteem) of each sub-group. Multiple regression analysis was performed to determine whether the interaction between family functioning and self-esteem was associated with an increase in cognitive distortion, and to determine whether family functioning, self-esteem and cognitive distortion interactions were associated with an increase in depressive symptoms.

4. Results

4.1. Descriptive analysis

The participants' ages ranged from 12 to 19 ($M = 14.12$, $SD = 2.50$) and most of them were at lower educational level (less than 12 years of school). Details of the demographic characteristics of both groups of participants are presented in Table 1

Table 1. Demographic characteristics of the sample

| Variables | Malays N (%) | Indonesians N (%) |
|-----------------------------|-----------------|----------------------|
| Gender | | |
| Male | 101 (53.4%) | 84 (64.1%) |
| Female | 88 (46.6%) | 47 (35.9%) |
| Age: mean (SD) | 16.32 (1.2) | 16.82 (1.6) |
| Education | | |
| High (>12 years) | 57 (30.2%) | 29 (22.1%) |
| Low (< 12 years) | 132 (69.8%) | 109 (77.9%) |
| Family income | | |
| Low (< 1000 RM/IRD*) | 98 (51.8%) | 123 (93.9%) |
| Middle (1000 – 1500 RM/IRD) | 48 (25.4%) | 8 (6.1%) |
| High (>1500 RM/IRD) | 43 (22.8%) | - |
| Place of residence | | |
| Urban | 62 (31.7%) | 36 (27.5%) |
| Rural | 127 (68.3%) | 96 (72.5%) |
| Total | 189 (59.1%) | 131 (40.9%) |

Note: *1000 IRD means IRD 1,000,000.00

4.2. Mean differences in the variables

In reference to Table 2, t-test analysis showed that Malay delinquents experienced more depression than Indonesian delinquents ($t=2.45$, $p<.05$). In addition, a significant difference was found in family functioning variable ($t=-6.59$, $p<.001$), family functioning of Indonesian delinquents was higher than those of the Malays. Furthermore, Indonesian adolescents had higher self-esteem compared to Malays ($t=-2.82$, $p<.01$). However, both samples did not show significant difference in cognitive distortion ($t=.175$, $p>.05$).

Table 2. Differences in depression, cognitive distortion, family functioning and self-esteem among Malay and Indonesian juvenile delinquents.

| Indicator | Malays N=189 | Indonesians N=131 | t |
|----------------------|-----------------|----------------------|----------|
| Depression | | | |
| <i>M</i> | 79.36 | 75.66 | 2.45* |
| <i>SD</i> | 14.02 | 11.90 | |
| Cognitive distortion | | | |
| <i>M</i> | 99.42 | 93.63 | 1.75 |
| <i>SD</i> | 30.10 | 27.62 | |
| Family functioning | | | |
| <i>M</i> | 63.70 | 71.05 | -6.59*** |
| <i>SD</i> | 10.34 | 9.01 | |
| Self-esteem | | | |
| <i>M</i> | 25.69 | 26.78 | -2.82** |
| <i>SD</i> | 3.37 | 3.37 | |

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

4.3. Effects of family functioning, self-esteem and cognitive distortion on depression

Based on multiple regression analysis, it was obvious that the interaction of family functioning and self-esteem significantly affected cognitive distortion ($F=30.48$, $p<.001$, coefficient $r^2 = 16.2\%$). Independently, these two variables affected cognitive distortion ($t=-3.46$, $p<.001$; $t=-6.32$, $p <.001$). Analysis was also conducted to assess the relationships of family functioning, self-esteem, cognitive distortion with depressive symptoms. Results showed that the interaction of these variables significantly affected depressive symptoms among juvenile delinquents ($F=39.48$, $p<.001$, coefficient $r^2 = 27.6\%$). It was also proven that cognitive distortion and self-esteem affected depression significantly ($t=8.19$, $p<.001$ for cognitive distortion; $t=-3.13$, $p<.01$ for self-esteem). In contrast, family functioning did not affect depression ($t=-.39$, $p>.05$).

Multiple regression analysis on Malay juvenile sample was also conducted to assess the interaction and individual effects of family functioning and self-esteem on cognitive distortion. Results of the analysis showed that the interaction of family functioning and self-esteem had a significant effect on cognitive distortion ($F=16.27$, $p<.001$, coefficient $r^2 = 15.3\%$). Results also revealed that these two variables, family functioning and self-esteem had a significant effect on cognitive distortion (family functioning, self esteem; $t = -2.77$, $p<.01$, $t = -4.50$, $p<.001$, respectively).

In addition, multiple regression analysis was conducted to determine the interaction effect of family functioning, self-esteem, and cognitive distortion on depressive symptoms among Malay delinquents. The result of the analysis showed that the interaction effect of these variables had significantly affected depressive symptoms ($F=17.18$, $p<.001$, coefficient $r^2 = 22.6\%$). The result also revealed that self-esteem and cognitive distortion had a significant effect on depressive symptoms ($t=-2.04$, $p<.05$; $t=5.46$, $p<.001$). However, family functioning did not have an effect on depressive symptoms ($t=-.25$, $p>.05$).

Among Indonesian juvenile delinquents, there was no significant correlation between family functioning and self-esteem ($r=.09$, $p>.05$). Multiple regression analysis conducted on Indonesian juvenile delinquents data found that the interaction between family functioning and self-esteem had a significant effect on cognitive distortion ($F=11.98$, $p<.001$), coefficient $r^2=16.1$. On its own, family functioning did not have a significant effect on cognitive distortion ($t=-1.36$, $p>.05$); while self-esteem had a significant effect on cognitive distortion ($t=-4.55$, $p<.001$).

A multiple regression analysis was conducted to determine the influence of family functioning, self-esteem, and cognitive distortion on depressive symptoms among Indonesian juvenile delinquents. The results showed that the three variables had a significant effect on depressive symptoms ($F=23.90$, $p<.001$, coefficient $r^2=36.8\%$). Self-esteem and cognitive distortion had a significant effect on depressive symptoms ($t=-2.43$, $p<.05$; $t=6.53$, $p<.001$); while family functioning had no significant effect on the symptoms ($t=.22$, $p>.05$).

The result of the analysis showed a pattern of relationships among different variables, in particular, the effect of family functioning on cognitive distortion. Family functioning had a negative significant relationship with cognitive distortion among Malay delinquents. This means that when family functioning is high, cognitive distortion is low, vice versa. However, in the case of Indonesian delinquents, family functioning had no significant effect on cognitive distortion. In addition, there was no correlation between family functioning and self-esteem among Indonesian delinquents.

5. Discussion

The findings of the present study suggest that self-esteem and cognitive distortion influenced depressive symptoms experienced by both Malay and Indonesian juvenile delinquents. The findings were in line with researches conducted by Maxwell, Gatchel and Mayer (1998), Marton, Churchard and Kutcher (1993) and Maxwell, Gatchel and Mayer (1997) emphasizing on the significance of relationship between cognitive distortion and depression: the more one experiences cognitive distortion, the more depressive symptoms he or she will possess.

In this study, family functioning for both the Malay and the Indonesian delinquents did not have a significant effect on depression. The finding was inconsistent with some other researches that indicated low effect of family

functioning on the psychological health of adolescents (Leung, Chen, Lue, & Hsu, 2007; Young, McFatter, & Clopton, 2001; Gallagher & Cartwright-Hatton, 2008). The absence of the family functioning effects can be attributed to socio-cultural factors. In communal societies such as those practiced in Malaysia and Indonesia, relatives or neighbours could possibly nurture the adolescents in the absence of the natural parents. Moreover, extended families are still practiced in most families in both Indonesia and Malaysia. Consequently, family functioning did not play a role as a determinant factor leading to depression.

Results of the present study showed that cognitive distortion had a significant effect on depression. Mobini, Pearce, Grant, Mills and Yeomans (2006) believed that an individual with cognitive distortion experienced less effective emotional states and the inability to consider the consequences of his or her behaviour. Depression results from irrational thoughts or distorted thinking of individuals. Accordingly, the finding of this study support studies by Marton, et al. (1993) and Maxwell, et al. (1997) who have also found similar findings.

Self-esteem was found to have a significant effect on depression and this is consistent with findings of previous studies (Roberts, et al. 1995; Kistner, et al., 2001; Hedlund & Rude, 1995; Hartlege, et al., 1998). Individuals with low self-esteem experienced feelings of being worthlessness and meaningless.

The influence of family functioning on cognitive distortion prevails only among Malay delinquents but not among Indonesian ones. This could be due to the gender distribution in the sample of the study. There were more female respondents in the Malay samples (46.6%) than there were in the Indonesian samples (35.9%). The assumption is that family functioning must have been more important for the Malays that it affected cognitive distortion for the fact that females are more dependent on the well functioning of the family. This is supported by the fact, the facets in the FACES III (i.e. measurements for family functioning) involves aspects like emotional bonding, supportiveness, time and friends which are assumed to be essential components for females.

6. Implications on Counselling Intervention

The study has a direct implication on the understanding of depression among juvenile delinquents. In order to reduce depressive symptoms in juvenile delinquents for both cultures, counselling should focus on the enhancement of adolescents' rational thought because cognitive distortion as indicated in the study is associated strongly with depression.

Family cohesion is very important especially for the Malay juvenile delinquents' cognitive recovery. Among the Malay delinquents family functioning was low compared to the Indonesians. When family functioning was low, cognitive distortion was high. Since the family functioning was low it can be assumed that the family did not have a positive influence on the children. Therefore, the family could not nurture a sound and positive cognition.

Family is also important in nurturing self-esteem among the delinquents. Henderson et al. (2006) suggest that the intervention for clinically referred adolescents should target both the individual adolescents and his/her family. This suggestion is also applicable to the juvenile delinquents. To ensure the effectiveness of the intervention, families should also be involved because families have a lot of influence on children and adolescents especially so in eastern countries such as Malaysia and Indonesia where family relationships are close knitted.

7. Conclusion

The present study revealed the difference in pattern of interactions among psychological variables for the Malay and Indonesian juvenile delinquents. The difference was probably caused more by different sample sizes between the two groups rather than the socio-cultural factors. Another factor that could have influenced the differences between the groups may be the gender proportions which were imbalanced. Nevertheless, the study gives some insight into the psychological states of the delinquents in both groups. It is no doubt that this study contributes to the field of knowledge in this area of studies.

References

- Alessi, N. E., McManus, M., Grapentine, W. L., & Brickman, A. (1984). The characterization of depressive disorders in serious juvenile offenders. *Journal of Affective Disorders*, 6(1), 9-17.

- Barriga, A.O., Landau, J.R., Stinson, B.L.II., Liao, A.K., & Gibbs, J.C. (2000). Cognitive distortion and problem behaviors in adolescents. *Criminal Justice Journal*, 27, 36-56.
- Briere, J. (2000). The Cognitive Distortion Scale professional manual. Odessa, FL: Psychological Assessment Resources
- Brislin, R. W., Lonner, W.J., Thorndike, R.M. (1973). Cross cultural research methods. New York: John Wiley & Sons.
- Bullis, M., Yovanoff, P., Mueller, G., & Havel, E. (2002). Life on the 'outs'-Examination of the facility-to-community transition of incarcerated youth. *Exceptional Children*, 69, 7-22.
- Carter, S.P. & Stewin, L.L. 1999. School violence in the Canadian context: An overview and model for intervention. *International Journal for the Advancement of Counseling*, 21, 4, 267-277.
- Center for Statistics (Badan Pusat Statistik) (1997). *Statistik kriminal: Sumber data Lembaga Pemasyarakatan 1995*. Jakarta: BPS
- Chiles, J. A., Miller, M. L., & Cox, G. B. (1980). Depression in an adolescent delinquent population. *Archives of General Psychiatry*, 37(10), 1179-1184
- Chiles, J.A., Miller, M.L. & Cox, J.B. (1980). Depression in an adolescent delinquent population. *Archives of General Psychiatry*, 37(10), 1179-1184.
- Corneau, M., & Lancot, N. (2004). Mental health outcomes of adjudicated males and families: The aftermath of juvenile delinquency and problem behavior. *Criminal Behaviour and Mental Health*, 14, 251-262.
- Daley, C.E. & Onwuegbuzie, A.J. (2004). Attributions toward violence of male juvenile delinquents: A concurrent mixed-methodological analysis. *The Journal of Social Psychology*, 144(6), 549-570.
- Doren, B., Bullis, M., & Benz, M.R. (1996). Predicting the arrest status of adolescents with disabilities in transition. *The Journal of Special Education*, 26, 363-380.
- Forney, W.S; Crutsinger, C., Forney, J.D. (2006). Influence of parent-child relationships on the global self-worth and morality of juvenile delinquents. *Journal of Family and Consumer Science*, 98, 1, 40-47.
- Gallagher, B. & Cartwright-Hatton, S. (2008). The relationship between parenting factors and trait anxiety: Mediating role of cognitive errors and metacognition. *Journal of Anxiety Disorder*, 22, 722-733.
- Harper, F.D. & Ibrahim, F.A. (1999). Violence and schools in the USA: Implication for counselling. *International Journal for the Advancement of Counseling*, 21, 4, 349-366.
- Hartanto (1990). Kenakalan remaja dilihat dari aspek perpisahan dengan orang tua dan aspek depresi. *Jiwa*, 23, 57-62.
- Hartlage, S., Arduano, K., & Alloy, L.B. (1998). Depressive personality characteristics : State dependant concomitants of depressive disorder and traits dependant of current depression. *Journal of Abnormal Psychology*, 107, 349-354.
- Hedlund, S., & Rude, S.S. (1995). Evidence of latent depressive schemata in formerly depressive individuals. *Journal of Abnormal Psychology*, 104, 517-525.
- Henderson, C.E., Dakof, G.A., Schwartz, S.J., & Liddle, H.A. (2006). Family functioning, self-concept and severity of adolescents externalizing problems. *Journal of Child and Family*, 15, 721-731.
- Hunt, S.C. (2008). The prevalence of delinquency in depressed and substance abusing adolescent girls. Unpublished Doctor of Psychology Dissertation of Seattle University, WA.
- Kim, H.S., & Kim, H.S. (2008). The impact of family violence, family functioning and parental partner dynamics on Korean juvenile delinquency. *Child Psychiatry and Human Development*, 39, 439-453.
- Kistner, J.A., Ziegert, D.I., Castro, R., & Robertson, B. (2001). Helplessness in early childhood: Predictions of symptoms associated with depression and negative self-worth. *Merrill-Palmer Quarterly*, 47, 336-351.
- Leung, K.K., Chen, C.Y., Lue, B.H. & Hsu, S.T. (2007). Social support and family functioning on psychological symptoms in elderly Chinese. *Archives of Gerontology and Geriatrics*, 44, 203-213.
- Loeber, R., Farrington, D.P., Stouthamer-Loeber, M., Moffitt, T.E., & Caspi, A. (1998). The development of male offending: Key findings from the first decade of the Pittsburgh Youth Study. *Studies on Crime & Crime Prevention*, 7, 141-171.
- Marton, P., Churchard, M., & Kutcher, S. (1993). Cognitive distortion in depressed adolescence. *Journal of Psychiatric Neuroscience*, 18, 3, 103-107.

- Matsuura, N., Hashimoto, T., & Toichi, M. (2009). Correlatives among self-esteem, aggression, adverse childhood experiences and depression among inmates of a female juvenile correctional facilities in Japan. *Psychiatry and Clinical Neuroscience*, 63, 478-485.
- Maxwell, T. D., Gatchel, R. J. & Mayer, T. G. (1997). Cognitive Predictors of Depression in Chronic Low Back Pain: Toward an Inclusive Model. *Journal of Behavioral Medicine*, 21, 131-143..
- Mobini, S., Pearce, M., Grant, A., Mills, J., & Yeomans, M.R. (2006). The relationship between cognitive distortions, impulsivity, and sensation seeking in a non-clinical population sample. *Personality and Individual Differences*, 40, 1153-1163.
- Olson, D.H., Sprenkle, D.H., & Russell, C.S. (1979). Circumplex model of marital and family system. I: Cohesion and adaptability dimension, family types, and clinical applications. *Family Process*, 18, 3-28.
- Reynolds, W. M., & Mazza, J. J. (1998). Reliability and validity of the Reynolds Adolescent Depression Scale with young adolescents. *Journal of School Psychology*, 36, 295-312.
- Roberts, J.E., Kassel, J.D., Gotlib, I.H. (1995). Level and stability of self-esteem as predictors of depressive symptoms. *Personality and Individual Differences*, 19, 217-224.
- Rokiah Ismail. (2000). Delinquency among inmates of rehabilitation institutions (Delinkuensi di kalangan penghuni institutsi pemulihan) in Abdul Rhman Embung, Negara, pasaran dan pemodenan Malaysia. Bangi, UKM, Publication, 536-568.
- Ryan, P.E., & Redding, R.E. (2004). A review of mood disorders among juvenile offenders. *Psychiatric Services*, 55, 1397-1407
- Unruh, D., Povenmire-Kirk, T; & Yamamoto, S. (2009). Perceived barriers and protection factors of juvenile offenders in their developmental pathway to adulthood. *Journal of Correctional Education*, 60,(3), 201-22
- Young, E.A., McFatter, R., & Clopton, J.R. (2001). Family functioning, peer influence, and media influence as predictors of bulimic behavior. *Eating Behaviors*, 2, 323-337.